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Water Use Efficiency Program Assessment and Work Plan - Year 3 August 14, 2002

CALFED Bay-Delta Program

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BACKGROUND

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Introduction

The CALFED Water Use Efficiency element, a cornerstone of CALFED's water management strategy, is unique nationally in its magnitude and its aggressive approach to water management. The WUE element consists of the following components:

- Agricultural water conservation,
- Urban water conservation,
- Water recycling, and
- Wetlands water management

The WUE element is based on the recognition that although efficiency measures are implemented locally and regionally, the benefits accrue at local, regional and statewide levels.

The ultimate goal of the WUE element is to develop a set of programs and assurances that contribute to CALFED goals and objectives, has broad stakeholder acceptance, fosters efficient water use, and helps support a sustainable economy and ecosystem. The goals of the WUE element will be met by providing financial and technical assistance to local water suppliers and water users to improve water use efficiency. In addition, the WUE element will develop credible assurances and science-based performance measures to demonstrate that CALFED Agencies are implementing an appropriate level of water use efficiency actions.

This document provides a report of past and expected progress on the Water Use Efficiency (WUE) element of the CALFED Bay-Delta Program. This includes a report of progress for implementation during Years 1 and 2 of Stage 1 (Fiscal Years 2000-01 through 2001-02); a Work Plan for Year 3 (Fiscal Year 2002-03) and an assessment of expected expenditures during Stage 1 (through 2007).

Record of Decision Actions and WUE Tasks

CALFED's August 2000 Record of Decision (ROD) specified fifteen WUE-specific actions and one Science-related action (#264) related to the WUE element (Appendix A contains a description of these actions). Table 1 provides a cross reference between these 16 ROD actions and 17 tasks that have been developed by WUE staff to effectively address these ROD Actions

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Table 1. ROD Actions and WUE Tasks

Action No.	Action Title	Due	WUE Tasks																
			1. Science & Monitoring	2. Water Measurement	3. Quantifiable Objectives	4. Certification	5. Agricultural Loans	6. Agricultural Grants	7. Urban Loans	8. Urban Grants	9. Ag Technical Assistance	10. Urban Technical Assist	11. Water Recycling Loans	12. Water Recycling Grants	13. Recycling Tech Assist	14. Recycling Research Grants	15. Managed Wetlands Grants	16. Wetlands Tech Assist	17. Oversight & Coordination
34	Program Implem. Plan	12/31/00	✓																
35	Public advisory committee	12/31/00																	✓
78	Loan & Grant Program	01/01/01					✓	✓	✓	✓			✓	✓		✓	✓		
76	WUE Finance proposal	07/31/01	✓																
171	Refine Quant. Objectives	Not specified			✓														
79	Establish Milestones	08/27/01																	✓
80, 114, 142, 177, 193, 270, 233	Annual Report	Dec. 31 of Each Year	✓																
77	Define Approp. Measurement	12/31/01		✓															
113	Urban BMP Certification	12/01/02				✓													
141	Water Measm't Legislation	12/01/03		✓															
173	Determine WUE Funding Needs	06/01/04	✓																
175	Technical Assistance	12/01/04									✓	✓			✓			✓	
174	4-year WUE Evaluation	12/31/04	✓																
176	Update Finance Plan	12/31/04	✓																
268	Performance Measures	Not specified	✓																
269	No Transfer Disincentives	Not specified																	✓

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Although all CALFED Agencies have the opportunity to contribute to WUE activities, the CALFED Implementation MOU (Attached to the ROD) provided implementation roles for CALFED agencies related to WUE and other Program Elements¹. Lead and Co-lead roles for the 17 WUE Tasks have been assigned to be consistent with the Implementation MOU (Table 2).

Table 2. WUE Tasks and Agency Roles

WUE Tasks	CALFED Agencies					
	CALFED	DWR	USBR	SWRCB	NRCS	CDFG
1. Science & Monitoring	Co-Lead					
2. Water Measurement	Lead					
3. Quantifiable Objectives	Co-Lead					
4. Certification	Lead					
5. Agricultural Loans		Co-Lead				
6. Agricultural Grants		Co-Lead			Lead (farm)	
7. Urban Loans		Co-Lead				
8. Urban Grants		Co-Lead				
9. Agricultural Technical Assistance		Co-Lead			Lead (farm)	
10. Urban Technical Assistance		Co-Lead				
11. Water Recycling Loans			Co-Lead			
12. Water Recycling Grants			Co-Lead			
13. Water Recycling Tech Assist		Co-Lead				
14. Water Recycling Research Grants				Lead		
15. Managed Wetlands Grants			Lead			
16. Managed Wetlands Tech Assist			Lead			
17. Oversight & Coordination	Lead					

¹ The CALFED Implementation MOU (attached to the ROD) delegated the following WUE implementation responsibilities:

- Oversight and Coordination: Policy Group and CALFED Program Staff
- Management of Ag & Urban Conservation:
 - Loans & Grants (excluding CVPIA & NRCS): DWR
 - CVPIA WUE financial assistance: USBR
 - Technical Assistance: DWR, USBR, & NRCS (on-farm)
- Management of Recycling:
 - Federal programs: USBR (in coordination with SWRCB)
 - State programs: SWRCB (in coordination with USBR)
- Management of Financial & Technical Assistance for Managed Wetlands: USFWS
- Program Support: CDFG (on-farm practices & AWMC)

SECTION I - YEAR 2 PROGRAM ASSESSMENT

A. Accomplishments to Date

This section provides brief descriptions of WUE activities by the CALFED Program and CALFED Agencies during Year 2 of CALFE Implementation. This information is organized by WUE task. The **Year 3 Work Plan (Section II)** includes information on the objectives of each of the WUE tasks as well as descriptions of proposed work during Year 3.

Task 1 - Science & Monitoring

In cooperation with the CALFED Science Program, CALFED agencies made initial progress in developing WUE performance measures and WUE project monitoring.

CALFED Program staff convened a meeting of the CALFED Science staff, members of academia, CALFED Agency staff, and stakeholders to begin developing an approach to monitoring WUE projects. DWR staff used this information to improve the monitoring requirements in the 2002 WUE Proposal Solicitation Package. USBR and CALFED Program staff used this information to develop a consultant scope of services to develop a monitoring methodology for CALFED-funded WUE Projects. The USBR entered into a contract with North State Consultants to execute this scope of work.

CALFED Program and Agency staff worked with the CALFED Science program to develop the scope of the following science teams to ensure that WUE-related work is done in an acceptable manner:

- 1) WUE Science Review Panel
- 2) WUE Science Application Committee

The WUE Science Review Panel will consist of independent scientists and will review the methods, data, and results of WUE science activities. The WUE Science Application Committee will consist of representatives of CALFED Agencies and stakeholders and will provide practical advice on how to apply science in the WUE context.

DWR staff drafted a Work Plan for the Science Application Committee and convened its first two meetings.

DWR appointed the 2002 Water Recycling Task Force from a broad, diverse group of interested stakeholders and agencies, including SWRCB, DHS, USBR, and CALFED. The Task Force will develop a report to the Legislature on overcoming the barriers to recycling of water in California. CALFED Program and SWRCB staff participated in the CALFED/Funding Subcommittee of the Task Force. This subcommittee outlined a white paper to describe the costs and benefits of water recycling projects in California.

Task 2 - Water Measurement and Ag Assurances

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CALFED Program staff continued development of Appropriate Water Use Measurement and Agricultural Assurances initiatives.

CALFED Program staff convened an independent scientific panel to help develop the definition of agricultural water measurement (part of ROD Action #77). The panel, which has met two times, is expected to hold its final deliberation in late 2002 after the completion of technical work and stakeholder outreach. The definition is expected to integrate the objectives of water measurement with the practical limits of existing technology and regional variability. DWR and USBR staff participated in these deliberations. CALFED Program staff also made progress on characterizing the costs and benefits of various measurement actions.

Significant progress also was made on establishing Agricultural Milestones (ROD Action #79), which are intended to provide assurance of appropriate implementation of the Agricultural WUE component through stated milestones. CALFED Program staff convened Ad Hoc stakeholder meetings to assist it in developing a comprehensive set of milestones, and associated benefits, remedies and/or consequences. DWR staff conducted four public workshops to solicit input on the draft milestones document. CALFED Program staff incorporated comments and presented the revised document to the WUE Subcommittee (to the BDPAC).

Task 3 - Quantifiable Objectives

USBR and CALFED Program staff worked to incorporate Quantifiable Objectives into the Draft CVPIA 2002 Criteria for Evaluating Water Management Plans and the Draft Wetlands Water Management Criteria.

CALFED Program staff updated the underlying data for several Quantifiable Objectives and convened three technical briefings with DWR WUE staff to deliver information on the theory and formulation of Quantifiable Objectives. The intent of these sessions was to provide DWR WUE staff with the tools and background to articulate more Quantifiable Objectives (see Task 3, Section II – Year 3 Work Plan)

Task 4 – Urban Certification

CALFED Program staff/consultants developed a Draft Staff Proposal for Urban Water Conservation Certification which is a conceptual framework for certifying urban water conservation by testing compliance with the terms of the Urban Memorandum of Understanding (MOU). This document was informed by a series of Ad Hoc stakeholder meetings with representatives of urban water suppliers and environmental interest groups.

This framework is intended to guide the development and eventual implementation of an urban water conservation certification process (ROD Action #113). The draft certification document was presented to the plenary session of the California Urban Water Conservation Council and the WUE Subcommittee. It also was discussed with interested members of the public through a series of four public workshops held throughout the state.

DWR, SWRCB, and USBR staff participated in the Ad Hoc work group.

Task 5 – Agricultural Loans

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DWR staff made progress in developing a loan solicitation package consistent with and based on funding from the DWR: Proposition 13 – Water Conservation Loan and Grant Program. The loan solicitation will be issued in Year 3.

Task 6 – Agricultural Grants

DWR staff prepared an agricultural grant Proposal Solicitation Package (PSP) that invited feasibility study grants (with minimal funding from Proposition 13) and projects grants (with no available funding). USBR and CALFED Program staff provided review of the draft PSP. DWR awarded 8 feasibility study grants totaling \$800,000. Staff of the CALFED Program, USBR, NRCS, SWRCB and stakeholder organizations reviewed submitted proposals.

USBR staff continued to implement the Water Conservation Field Services Program (WCFSP) and provided agricultural grants totaling \$503,000 (estimated local cost-share is approximately \$500,000).

Through the USDA Environmental Quality Incentive Program (EQIP) NRCS has provided an estimated \$3,515,800 in cost share for about 2,000 on-farm irrigation projects and other water management activities. Local (farmer) contribution was about \$7,648,200. These activities are considered Category B.

Task 7 – Urban Loans

No urban water conservation loans were available during Year 2.

Task 8 –Urban Grants

DWR staff prepared an urban grant PSP with funding from Proposition 13. USBR and CALFED Program staff provided review of the draft PSP. DWR awarded 29 grants totaling \$9 million (estimated local cost share was \$2.16 million). These projects are expected to conserve 171 thousand acre-feet of water. Staff of the CALFED Program, USBR, NRCS, SWRCB, and stakeholder organizations reviewed submitted proposals.

USBR staff awarded urban water conservation grants through the WCFSP totaling \$482,000 (estimated local cost-share is approximately \$480,000).

Task 9 & 10 – Agricultural and Urban Technical Assistance

DWR received funding and authority for establishing ten new positions to provide technical assistance for urban and agricultural water conservation, financial assistance, and recycling. Activities included information dissemination, training, direct planning and design service, providing technical staff for the 2002 Recycled Water Taskforce established by AB331, and assistance with Loan and Grant applications.

DWR and USBR jointly funded technical assistance activities of the Agricultural Water Management Council. DWR and USBR also jointly funded technical assistance activities of the California Urban Water Conservation Council.

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NRCS began developing the scope of outreach activities to determine priorities for on-farm WUE grants and technical assistance. These activities were funded by CALFED through the USBR.

Task 11 – Water Recycling Loans

The SWRCB Office of Water Recycling awarded six water recycling loans totaling \$72 million and committing all water recycling construction loan funds, including 1984 Bond law funds. Because water recycling construction grants administered by the SWRCB only provide for twenty-five percent of the construction funding, loan funding from these programs provide financial assistance for the remaining seventy-five percent of the construction costs. Projects receiving SWRCB loan funding contribute to a proposed increase of 36,000 acre-feet per year of recycled water.

Task 12 – Water Recycling Grants

The SWRCB awarded fifteen water recycling grants totaling \$50 million of a total of \$57 Million of water recycling construction grant funds from Proposition 13 (includes remaining Proposition 204 funds). These grant funds provide for twenty-five percent of the construction costs of the project facilities. The remaining seventy-five percent of the construction funding costs are funded by local funds and/or other funding sources (SWRCB loans, USBR, etc.) These projects include the loan funded projects described in Task 11 above, and contribute to the proposed increase of 36,000 acre-feet per year of recycled water.

The USBR awarded 9 water recycling construction projects totaled \$19.7 million which were matched by \$59,193,000 in local cost-share. These projects are expected to recycle XXX [To be provided on 8/27/00] acre-feet of water per year.

Task 13 - Water Recycling Technical Assistance

DWR and SWRCB have played a vital role in the development of the 2002 Water Recycling Task Force. The mission of the Task Force is to convene statewide policy makers to determine the key obstacles to water recycling in California, and make recommendations to the Legislature for solutions to the identified obstacles. SWRCB member Richard Katz serves as the chair of the Task Force; CALFED Director Patrick Wright and DWR Deputy Director Jonas Minton also serve on the committee.

As established in Assembly Bill 331, DWR has taken the lead role in developing the Task Force and the SWRCB is funding the expenses of the Task Force. Additionally, the SWRCB's Office of Water Recycling has loaned one staff person to work solely on Task Force support tasks. CALFED staff is participating in the "CALFED/Funding" subcommittee of the Task Force.

Task 14 – Water Recycling Research Grants

The SWRCB has provided a \$1 million research grant to the WaterReuse Foundation from the Proposition 13 water recycling research grant funds. The SWRCB's \$1 Million grant commitment to the Foundation's existing research program is matched with grant funds from the U.S. Bureau of Reclamation. The National Water Research Institute convened nationwide experts and identified ten research topics as being the highest priorities of research to further the use of recycled water for non-potable uses. Individual research topics within the identified areas

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of interest are defined by the Foundation and requests for proposals are issued for each topic. The benefits gained by funding granted towards water recycling research are not immediately identifiable as are benefits gained from funding of construction projects.

The SWRCB, in conjunction with the 2002 Water Recycling Task Force, will administer the remaining \$1 million of research grant funds towards statewide research needs identified by the Task Force.

Task 15 – Managed Wetlands Grants

No grants were available in Year 2 for Managed Wetlands.

Task 16 - Managed Wetlands Technical Assistance

The USBR made progress on developing Draft Criteria for water management on wetlands. CALFED Program staff assisted the USBR in incorporating Quantifiable Objectives into Draft Criteria.

Task 17 – Oversight and Coordination

WUE oversight and coordination activities during Year 2 included formal and informal communication among agencies and stakeholders; development and implementation of reporting tools; and ongoing strategic planning.

The primary method of formal agency/stakeholder communication for the WUE element is the WUE Subcommittee to the Bay-Delta Public Advisory Committee (BDPAC). The WUE Subcommittee provides advice and policy recommendations, in the form of advisory statements or documents, to the BDPAC with copies to the CALFED Policy Group. Advice and policy recommendations will incorporate and/or be responsive to input received from WUE Subcommittee members, CALFED agency staff, CALFED Policy Group, and the BDPAC. Policy Group, BDPAC, and the WUE Program Manager may provide direction to and ask WUE-PAC to address issues related to its mission and objectives. During Year 2, CALFED Program staff developed the “charter” and membership of the WUE Subcommittee and convened meetings of the Subcommittee on March 6, 2002 and June 24, 2002.

Informal communication took place during Year 2 through interagency meetings, public workshops, and Ad Hoc work groups as needed.

CALFED Program, DWR, SWRCB, and USBR staff provided information to CALFED management and stakeholders through periodic reports, by contributing data to the CALFED tracking program, and through formal reports like this one.

Because the SWRCB recycling programs are designated as Category A by the ROD, SWRCB staff has increased participation in meetings with CALFED and other Water Recycling funding agencies during Year 2.

B. Program Delays

DWR has not received any eligible agricultural water conservation loan applications (funded by Prop 13). Due to the lack of interest, DWR did not solicit agricultural water conservation loans in Year 2 but expects to have a revised agricultural loan solicitation during Year 3.

The SWRCB has experienced no significant delays in the administering of Proposition 13 funds to local agencies for water recycling projects. Delays on project funding obligations that have occurred are due to difficulty of local agencies in completing required environmental documents/procedures (i.e. California Environmental Quality Act requirements, State Historic Preservation Office clearance, etc.).

As of June 2002, only \$9.3 million remain of the SWRCB's Proposition 13 - 2000 Bond Law Water Recycling funds for southern California remain to be committed. Three southern California agencies are proposed to receive water recycling construction grant commitments by October 2002, completely committing all Proposition 13 construction funds for water recycling facilities.

The SWRCB's Office of Water Recycling is currently involved in the funding approval process to commit further grant funding to five local agencies for the construction of recycled water facilities. However, recent legislation lacked the appropriation of further funds into the water recycling sub-accounts. As a result, the funding process for these agencies has been placed on hold.

The USBR has experienced no significant delays in implementation of the WCFSP in the Central Valley.

The NRCS has experienced delays in providing on-farm water conservation technical assistance and recommendation regarding farm-level water conservation grants because... [To be provided on 8/27/00].

CALFED continues to experience significant delays in executing contracts for outside services needed to support program implementation. Critical services that have been delayed include facilitation services needed to effectively convene stakeholder work groups and technical services required to determine the costs and benefits of water measurement. As a result, progress on two ROD commitments – appropriate water use measurement and agricultural milestones – is moving forward more slowly than expected (see section below.)

C. Status of Rod Commitments

The following WUE ROD Commitments had deadlines prior to the end of Year 2:

- Program Implementation Plan (ROD Action #34): Due 12/31/00
- Public advisory committee (ROD Action #35): Due 12/31/00
- Loan & Grant Program (ROD Action #78): Due 01/01/01
- Finance proposal (ROD Action #76): Due 07/31/01

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- Establish Milestones (ROD Action #79): Due 08/27/01
- Define Appropriate Measurement (ROD Action #77): Due 12/31/01
- Annual Report (ROD Action #80): Due 12/31/01

All of these tasks have been completed except Task 77 – Define Appropriate Measurement and Task 79 – Establish Ag Milestones. CALFED is making significant progress on both of these overdue tasks. ROD Action #77 is scheduled to be completed in Mid-2003 which will allow the dependent ROD Action #141 (Water Measurement Legislation) to be completed on schedule during the 2003 California Legislative session. Task 79 is scheduled to be completed in September 2002, pending review by the BDPAC and the CALFED Policy Group.

SECTION II - YEAR 3 WORK PLAN

A. Tasks and Schedule

Note: Major Work Products (Products) and due dates related to the tasks described below are listed in Table 3.

Task 1 - Science & Monitoring

Objectives: The primary objective of WUE science activities is to provide credible water use efficiency performance measures. Performance measures represent estimates of WUE costs and benefits (e.g. volume water conserved), including past performance (since the ROD) and projections of likely future performance. Accordingly, WUE science tasks include activities related to collecting and analyzing data from water conservation and recycling projects, developing appropriate inference models, performing computations, and developing appropriate WUE monitoring methods and incorporating them into proposal solicitation processes.

WUE science activities must be done in an open and scientifically rigorous manner if their results are to be broadly accepted by CALFED stakeholders. CALFED agencies will use the following science teams to ensure that work is done credibly:

- 1) WUE Science Review Panel
- 2) WUE Science Application Committee

The WUE Science Review Panel, to be convened by the CALFED Program, will review the methods, data, and results of WUE science activities. It will consist of up to seven independent scientists with collective expertise in agricultural engineering, water science, resource economics, water science and other expertise as needed.

The WUE Science Application Committee, which is convened by DWR, will provide practical advice on how to apply science in the WUE context. It will consist of representatives of CALFED Agencies and stakeholders.

Planned Activities: CALFED agencies will continue working to develop quantified performance measures and to develop processes for providing on-going scientific review of WUE activities.

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Table 3. WUE Year 3 Major Work Products

Work Product		Due Date	Responsible Agency	Related WUE Task
#	Description			
1.01	TM: Guidelines for Computing WUE Performance (Perf.)	Oct '02	CALFED	1. Science & Monitoring
1.02	Invitations to WUE Science Review Panelists	Jan '03	CALFED	
1.03	Meeting Agendas & Key Outcomes: WUE Science Panel	Quarterly	CALFED	
1.04	MS AccessMonitoring Database	May '03	CALFED	
1.05	Markup or Review Memo: Approach to WUE Perf.	Mar '03	Sci. Rev. Panel	
1.06	Markup or Review Memo: WUE Monitoring Requirement	Jan '03		
1.07	Markup or Review Memo: WUE Perf. Calcs.	Jan '03	Sci. App. Comm.	
1.08	Review Memo: WUE Monitoring Data	Aug '03		
1.09	Calcs: Past WUE Perf. - CALFED Funded Projects	Nov '02	DWR (Ag), DWR (Urban), SWRCB (Recy), USBR (Wetlds)	
1.10	Calcs: Past WUE Perf. - Sample of Locally Funded Projects	Nov '02		
1.11	TM: Monotoring Requirement for WUE	Nov '02		
1.12	TM: Approach: Past WUE Perf.	Dec '02		
1.13	TM: Approach: Projecting WUE Perf.	Jan '03		
1.14	Data: Monitoring Information	Jun '03		
1.15	TM: WUE Perf. Year 1-2	Jun '03		
1.16	TM: Stage 1 Projection of WUE Perf.	Aug '03		
1.17	TM: 30-Year Projection of WUE Perf.	Aug '03		
1.18	Meeting Agendas & Key Outcomes: Science App. Comm.	Varies	DWR	
1.19	TM: WUE Science Priorities	Sep '03	DWR & USBR	
2.01	Definition of Appropriate Measurement of Ag Water Use	Dec '02	CALFED	2. Water Measurement
2.02	TM: Defining Approp. Measurement of Urban Water Use	Sep '02		
2.03	Definition of Approp. Measurement of Urban Water Use	Mar '03		
2.04	Draft Components of Water Measurement Legislation	May '03		
2.05	Agricultural Milestones	Sep '02		
3.01	Meeting Agendas & Key Outcomes: QO Training	Dec '02	CALFED	3. Quantifiable Objectives
3.02	TM: Review of Existing Quantifiable Objectives	Mar '03	DWR	
3.03	Updated Document: Details of Quantifiable Objectives	May '03		
3.04	Draft Wetlands Water Management Criteria	Jun '03	USBR	
4.01	Final Framework: Urban Water Conservation Certification	Sep '02	CALFED	4. Certification
4.02	Draft elements of Certification Legislation	Dec '02		
5.01	Proposition 13 Ag Loan Solicitation	Mar '03	DWR	5. Ag Loans
6.01	Water Conservation Field Service Program	Mar '03	USBR	6. Ag Grants
None				7. Urban Loans
8.01	WUE Proposal Solicitation Package	Nov '02	DWR	8. Urban Grants
9.01	TM: Best Approaches to On-Farm WUE Incentives	Apr '03	NRCS	9 & 10. Ag & Urban Tech. Assistance
None				11. Recy Loans
12.01	Proposition 13 Water Recycling Grant Awards	Continuous	SWRCB	12. Recycling Grants
12.02	Title XVI Recycling Grant Awards	Sep '03	USBR	
13.01	2002 Water Recycling Task Force Report	Apr '03	SWRCB	13. Recycling Tech Assist
13.02	White Paper on Water Recycling Costs and Benefits	Sep '02	CALFED & SWRCB	
None				14. Recy Resrch
None				15. Wtlns Grnt
16.01	Criteria for Water Management on Wetlands	Sep '03	USBR & CALFED	16. Wtln Tech
17.01	Annual WUE Assessment and Work Plan	Sep '02	CALFED	17. Oversight & Coordination
17.02	WUE Annual Report	Dec '02		
17.03	WUE Tracking Report	Oct '02		
17.04	Meeting Materials and Outcomes: WUE Subcommittee	Varies		

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CALFED Program staff will coordinate with the CALFED Science Program, other CALFED agencies, and stakeholders to name four to six independent scientists to serve on the WUE Science Review Panel (Product 1.02). CALFED Program staff will convene at least four meetings of the WUE Science Review Panel (Product 1.03). The staff of DWR, NRCS, SWRCB, and USBR will participate in these meetings as necessary. The WUE Science Review Panel will review science products as required, including Products 1.05 and 1.06 (Table 3).

DWR will continue to convene the WUE Science Application Committee and other WUE agencies will actively participate (Product 1.19). CALFED Program Staff will act as liaison between the Review Panel and Application Committee. The Application Committee is expected to meet approximately once a month during Year 3. The Science Application Committee will provide guidance on the practical aspects of WUE Science and will review scientific work products as appropriate (Products 1.07 and 1.08).

CALFED Program staff will continue to oversee and coordinate the development of quantified WUE performance measures that are being developed by CALFED Agencies (please see Task 3, Quantifiable Objectives for a discussion of agricultural performance measures). CALFED Program staff will provide implementing agencies with guidance on computing WUE performance (costs and benefits), including the timeframe for computing past and future performance and other parameter (Product 1.01) and will prepare a monitoring database (Product 1.04).

WUE implementing agencies will perform a variety of science activities including the following:

- Calculate the performance of WUE grant projects and a sample of locally funded projects (Products 1.09 & 1.10).
- Develop guidelines monitoring WUE projects (Product 1.11) and collect monitoring data (Product 1.14).
- Articulate an approach to estimating the past performance of all WUE projects that are directly or indirectly connected to the Bay-Delta (Product 1.12).
- Articulate an approach to estimating the expected performance of all WUE projects that are likely to be directly or indirectly connected to the Bay-Delta in the future (Product 1.13).
- Use these approaches (after adjusting them based on review comments from the WUE Science Application Committee and the WUE Science Review Panel) to estimate WUE performance during Years 1 and 2 (Product 1.15), Stage 1 (Product 1.16), and through 2030 (Product 1.17).

DWR staff will conduct the activities above that are related to agricultural and urban water conservation; SWRCB will conduct the recycling-related activities; and USBR staff will conduct those activities related to managed wetlands.

DWR staff will also showcase some of the WUE grant projects and facilitate discussions of associated monitoring at the CALFED Science Conference to be held in January 2003.

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Some research needs have been identified during Years 1 and 2. DWR and the USBR will continue to jointly implement CALFED research efforts determining needed research projects and individually managing projects as appropriate. DWR and USBR, in consultation with the Science Application Committee will also prepare a list of WUE research priorities (Product 1.19).

Task 2 - Water Measurement and Ag Assurances

Objectives: CALFED policy-makers recognized that there is a perception among some CALFED stakeholders that existing approaches to water use measurement are inadequate. Accordingly, two ROD Actions – #77, Define Appropriate Measurement and #141, Water Measurement Legislation – commit CALFED to resolve measurement issues. ROD Action #77 involves developing a consensus definition of appropriate measurement of water in agricultural and urban sectors. ROD Action #141 directs CALFED to draft legislation (for introduction in the 2003 California Legislative session) that would require appropriate measurement of all water uses in the state – including surface and groundwater.

The ROD also directed CALFED to establish Agricultural Milestones (ROD Action #79) which is to provide assurance of appropriate implementation of the Agricultural WUE component through stated milestones, and associated benefits, remedies and/or consequences.

Planned Activities: CALFED Program staff will convene the final deliberation of the independent scientific panel in fall 2002 to develop the agricultural component of the definition of appropriate measurement of water use. DWR, SWRCB, and USBR staff will participate in these deliberations. This will be closely followed by a staff draft of the definition of appropriate measurement of agricultural water use (Product 2.01). CALFED Program staff will solicit CALFED Management and public review of the draft definition.

CALFED Program staff will conduct in-depth stakeholder interviews to determine the scope and appropriate process for developing the definition of appropriate measurement of urban water use (Product 2.02). CALFED Program staff will then: 1) conduct the necessary background technical work; and 2) initiate an appropriate process to effectively gather ongoing input from urban and environmental stakeholders. DWR, SWRCB, and USBR staff will participate in this process. The product of these activities will be a draft definition of appropriate measurement of urban water use (Product 2.03). CALFED Program staff will solicit CALFED Management and public review of the draft definition.

Using the agricultural and urban water measurement definitions described above, CALFED Program staff – with appropriate BDPAC and CALFED Policy Group concurrence – will work with the State Legislature to draft elements of water measurement legislation (Product 2.04).

CALFED Program staff will complete the Agriculture Milestones (ROD Action #79) in September 2002, pending review by the BDPAC and CALFED Policy Group (Product 2.05).

Task 3 - Quantifiable Objectives

Objectives: CALFED has developed a list of 200 potential Quantifiable Objectives, practical contributions that can be made to the Bay-Delta system through agricultural water management. These Quantifiable Objectives were developed during CALFED's planning phase to provide

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stakeholders with tangible yet practical agricultural WUE performance measures. CALFED Program Staff has articulated (quantified) 60 of those 200 potential Quantifiable Objectives. During implementation, CALFED agencies will refine existing Quantifiable Objectives and articulate more as part of an overall effort to develop quantified performance measures using rigorous science (see Task 1 – Science and Monitoring, above).

Planned Activities: DWR staff, using available information, will refine and review existing Quantifiable Objectives (Product 3.02) and articulate approximately XXX [To be provided on 8/27/02] more Quantifiable Objectives during Year 3 (Product 3.03). USBR staff will continue to incorporate Quantifiable Objectives into the Draft CVPIA 2002 Criteria for Evaluating Water Management Plans and the Draft Wetlands Water Management Criteria (Product 3.04). CALFED Program staff will provide the information and training to DWR and USBR necessary to assist their articulation of the already identified Quantifiable Objectives (Product 3.01).

Task 4 – Urban Certification

Objectives: The ROD directed CALFED to develop a method for certifying urban water conservation by building upon the work of the California Urban Water Conservation Council (CUWCC), a non-profit organization consisting of urban water suppliers, environmental organizations and other interested parties. The CUWCC's Memorandum of Understanding (MOU) is broadly supported agreement that specifies 14 urban water conservation best management practices (BMPs).

CALFED Program staff has developed a proposed conceptual urban certification framework consistent with the following driving rationales: (1) certify compliance with the CUWCC's MOU and build upon the CUWCC's experience and expertise; (2) rely on an independent entity, not the CUWCC, to take on the formal certification and appeals responsibilities; (3) develop a framework in a balanced manner that furthers conservation efforts, supports CALFED objectives and preserves the MOU's flexibility; (4) build capacity and awareness among smaller and disadvantaged water suppliers; (5) focus certification initially on a limited number of water suppliers; (6) minimize redundancies and inconsistencies with existing regulatory and planning processes; and, (7) recognize the value of and need for an adaptive management approach.

Planned Activities: CALFED Program staff will finalize the proposed conceptual framework for certifying urban water conservation pending review by the BDPAC and CALFED Policy Group (Product 4.01). Staff will continue to work with DWR, USBR, and the California Urban Water Conservation Council (CUWCC) to resolve the outstanding technical issues described in the certification framework. Staff will also continue to work with the California Public Utilities Commission to resolve issues related to compliance by Investor Owned Utilities. CALFED will begin drafting components of legislation required for SWRCB to implement Urban Water Conservation Certification (Product 4.02).

Task 5 – Agricultural Loans

Objectives: A primary objective of the CALFED WUE element is to facilitate implementation of WUE actions at the local level – by cities, water suppliers, and farmers. CALFED agencies use low interest loans to help local entities overcome financial barriers to WUE implementation.

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Planned Activities: DWR will release the second Proposition 13 Agricultural Loan Program application package during Year 3 (Product 5.01). Agricultural Water Conservation Loans will be available on an ongoing basis until the remaining Proposition 13 agricultural water conservation funds are awarded.

Task 6 – Agricultural Grants

Objectives: As with loans, CALFED agencies also use grant funding to invest in local WUE implementation.

Planned Activities: USBR will continue the Water Conservation Field Service Program in Year 3 at higher funding levels than FY 02. \$1.21 million in funding is available (Product 6.01).

USDA, NRCS EQIP funds for on-farm practices are expected to increase significantly and may triple for Year 3. Funding could exceed \$5,000,000. These activities may be considered for inclusion in Category A.

Task 7 – Urban Loans

Objectives: CALFED agencies use low interest loans to help local entities overcome financial barriers to WUE implementation.

Planned Activities: No urban water conservation loans will be available during Year 3.

Task 8 – Urban Grants

Objectives: CALFED agencies use grants to help local entities implement WUE projects.

Planned Activities: DWR will release the third WUE Proposal Solicitation Package in Year 3. \$18 million of Proposition 13 funds are available for urban grants (Product 8.01). Staff of the CALFED Program, NRCS, SWRCB, USBR, and stakeholder organizations will provide review of the draft PSP and the proposals. USBR will continue the Water Conservation Field Service Program in Year 3 at higher funding levels than FY 02. \$1.21 million in funding is available.

Task 9 & 10 – Agricultural and Urban Technical Assistance

Objectives: CALFED agencies provide technical assistance to help local entities: (1) assess the costs, benefits, and feasibility of potential WUE projects; (2) determine the best approach to implementing WUE actions; (3) effectively prepare grant and loan applications; and (4) comply with WUE reporting requirements (e.g. related to urban water conservation certification).

Planned Activities: DWR staff will provide technical assistance in a variety of ways including through staff, contractors or consultants, and through the staff of cooperating agencies and organizations such as water suppliers, the AWMC, and the CUWCC. Activities will include information dissemination, training, direct planning and design service, and assistance with Loan and Grant applications.

The USBR will continue to provide funding and guidance to the Agricultural Water Management Council and the California Urban Water Conservation Council. USBR will also continue to provide technical assistance on new and innovative water measurement through cooperative

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agreements with the Irrigation Training and Research Center (at Cal Poly, San Luis Obispo) Cal State University at Chico, and the Center for Irrigation Technology (at Fresno State University).

NRCS will continue outreach activities to determine priorities for on-farm WUE grants and technical assistance. These activities will include a series of public meetings geared toward irrigators and growers. NRCS staff will produce a technical memorandum describing the best approaches to providing financial incentives to on-farm water conservation (Product 9.01).

Task 11 – Water Recycling Loans

Objectives: CALFED agencies provide low interest loans to local entities to help them overcome financial barriers to water recycling.

Planned Activities: To maximize the use of future appropriations of state monies for grant funding, the SWRCB will utilize the existing State Revolving Fund (SRF) Loan Program to provide low interest loans for water recycling projects.

Task 12 – Water Recycling Grants

Objectives: CALFED agencies use grants to help local entities recycle water.

Planned Activities: The SWRCB proposes to award future funding that becomes available for water recycling grants through their Water Recycling Construction program during Year 3 (Product 12.01). However, because Proposition 50 funds may not become available until the July 2003 State Budget, further grant funding may not be available to administer to local agencies for water recycling projects during Year 3. At this time, the SWRCB proposes approximately \$20 Million of grant funding needed for projects that are ready to proceed with design and construction.

During Year 3 the USBR will award \$19.7 million in water recycling grants through Title XVI (Product 12.02).

Task 13 - Water Recycling Technical Assistance

Objectives: CALFED agencies provide technical assistance to help local entities overcome technical hurdles in recycling water.

Planned Activities: The staff of DWR, SWRCB, and the CALFED Program will continue to participate in the 2002 Water Recycling Task Force during Year 3 and expected to issue their final report in April 2003 (Product 13.01). CALFED Program and SWRCB staff will collaborate through the Task Force on estimating the costs and benefits of water recycling projects in California (Product 13.02).

Task 14 – Water Recycling Research Grants

Objectives: The SWRCB provides research grants according to the provisions of Proposition 13 to advance the state of knowledge on water recycling. Due to strong stakeholder need for funding of regional planning efforts and development of mandatory environmental documents, the SWRCB may consider the use of future grant funds to assist in this additional funding demand.

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Planned Activities: The SWRCB, in conjunction with the 2002 Water Recycling Task Force, is currently considering the remaining \$1 Million of research funds to be granted towards statewide research needs identified by the Task Force. Additional areas of statewide research needs will be identified in the Task Force's final report to the legislature in April 2003.

Task 15 – Managed Wetlands Grants

Objectives: CALFED agencies could potentially provide grants to the operators of managed wetlands to help them improve water use efficiency.

Planned Activities: No grant funding will be available in Year 3 for Managed Wetlands.

Task 16 - Managed Wetlands Technical Assistance

Objectives: The USBR provides technical assistance to managed wetland operators to help them overcome technical hurdles to improved water use efficiency.

Planned Activities: The staff of USBR and the CALFED Program will continue work to incorporate Quantifiable Objectives into Draft Criteria for water management on wildlife refuges (Product 16.01).

Task 17 – Oversight and Coordination

Objectives: The CALFED Implementation MOU (attached to the ROD) delegated Oversight and Coordination activities to the CALFED Policy Group and CALFED Program Staff. The objective of Oversight is to assist CALFED agencies in interpreting the ROD and in identifying methods for implementing the intent of the ROD within their agencies existing mandates and authorities. The purpose of coordination is to facilitate communication – between CALFED agencies, CALFED Management Group, CALFED Policy Group, the Bay-Delta Public Advisory Committee (and its Subcommittees) – and thereby ensure effective and efficient implementation.

Planned Activities: CALFED Program staff will continue to provide guidance to WUE agencies in interpreting the ROD and continue to facilitate communications. Staff will continue to employ methods of informal communications, such as staff-level meetings and conference calls with agency staff dissemination of information. Staff will also engage in formal communications as necessary, such as reports to CALFED Management Group, CALFED Policy Group, the Bay-Delta Public Advisory Committee, and the WUE Subcommittee.

CALFED Program staff will also continue the following ongoing Oversight and Coordination activities:

- Coordinate the preparation of the WUE Annual Assessment and Work Plan (this document) with the staff of DWR, NRCS, SWRCB, and USBR (Product 17.01)
- Coordinate the preparation of the WUE Annual Report (ROD Action #114) with the staff of DWR, NRCS, SWRCB, and USBR (Product 17.02)
- Collect and review WUE tracking information for use in the CALFED Tracking System (Product 17.03)
- Convene approximately six meetings of the WUE Subcommittee (Product 17.04).

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CALFED Program staff will also continue to lead implementation of Task 2, Water Measurement/Assurances and Task 4, Urban Water Conservation Certification (see task descriptions above).

B. Category A and B Programs/Funds

The only potential change in WUE Category A & B funding is NRCS funding from the Federal Farm Bill. USDA, NRCS EQIP funds for on-farm practices are expected increase significantly and may triple for Year 3. Funding could exceed \$5,000,000. CALFED Management Group has not determined if these funds should be in Category A.

C. ROD Implementation Commitments

The following ROD Actions are behind schedule but projected to be completed during Year 3:

- Establish Milestones (ROD #79): Due 08/27/01
- Define Appropriate Measurement (ROD #77): Due 12/31/01

The WUE Annual Report (ROD #114) is due during Year 3 (12/31/02) and is expected to be completed on schedule. Urban Water Conservation Certification (Action 113) is due during Year 3 (12/01/02) but is not expected to be fully implemented until after legislation is passed and the SWRCB promulgates regulations. This may not occur until late 2004.

D. Management Group

Table 5 provides a schedule of the expected reports to CALFED Management Group.

Table 4. Schedule of WUE Reports to CALFED Management Group

Date	Topics	Purpose
Aug-02	Draft Urban Certification Framework	Briefing
	Draft Agricultural Assurances	Briefing
Oct-02	DWR's 2003 WUE PSP Criteria	Recommended Approval
Feb-03	Draft Def. of Appropriate Ag Water Meas.	Information
Feb-02	DWR's 2003 WUE PSP Report on Proposals	Information
Mar-02	DWR's 2003 WUE PSP Recom. Selection	Recommended Approval
May-02	Draft WUE Finance Proposal	Recommended Approval
	Draft Def. of Appropriate Meas. (Ag/Urban)	Recommended Approval
	Report on Quantifiable Objectives	Information
	Report on WUE Science	Information
	Draft WUE Technical Assistance Plan	Recommended Approval

In addition, the SWRCB staff proposes submitting quarterly funding status report to the CALFED Management Group.

E. Public Participation

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The CALFED WUE Subcommittee (to the BDPAC) will be the primary mechanism for public participation. The WUE Subcommittee is expected to meet at least four times during Year 3.

Other Ad Hoc stakeholder groups and public workshops will be held as needed to gain stakeholder input on the following specific issues:

- Definition of Appropriate Measurement of Agricultural Water Use (Independent Panel and Public Workshops)
- Definition of Appropriate Measurement of Urban Water Use (Undefined stakeholder process and Public Workshops)
- WUE Science Review Panel (Public meetings)
- WUE PSP – Grants and Loans (Public workshops)

CALFED WUE Staff and agencies will continue to participate in Environmental Justice and tribal outreach activities.

F. Agency participation

Coordination of WUE Implementation with participating CALFED agencies is essential for the successful implementation of the Water Use Efficiency Program. Although CALFED Program Staff serves as the lead entity for coordination, the success of the WUE element depends on teamwork and coordination activities of CALFED Agencies including the Department of Food and Agriculture, DWR, NRCS, SWRCB, and USBR. The staff of WUE agencies meet frequently to develop specific coordination efforts.

G. Science Review

Please refer to the description of planned activities of Task 1 - Science & Monitoring (Section II, A) for a discussion of planned scientific review.

H. Budget by Task

Please see Table 5, ~~attached~~ [Note: Table 5 is not attached to this draft but will be available on 8/26/02].

SECTION III – STAGE 1

A. Stage 1 Projected Expenditures

Projected WUE expenditures for Stage 1 are significantly different from those described in the ROD (Figure 1 and Table 5). The primary difference is the lack of Grant funding available for water conservation grants (for agriculture, urban, and managed wetlands) in years 2 and 3. This shortfall will significantly impact the anticipated performance of the WUE program element, especially in early years. This most directly affects ROD action 174 (Comprehensive 4-Year WUE Evaluation) – an important part of evaluating CALFED Program balance.

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B. State, Federal, Local/Water User Cost Sharing

CALFED and WUE implementing agencies have appropriately documented the State and Federal investment in CALFED Category A WUE activities. These records indicate that state and federal investment in agricultural and urban water conservation is lagging far behind the levels called for in the ROD but that water recycling investment is ahead of schedule.

WUE agencies also have adequate records of local cost share contributed as a match to CALFED Grants and Loans. However, the ROD calls for an aggregate local cost share of 50% for WUE, which implies that CALFED should be accounting for purely local WUE investments. Activities have begun to accurately account for these investments.